

REMARKS

Claims 1-11 are pending. Claims 1-11 are rejected. Claims 1-10 are amended and new claims 12-14 added. Support for the amendments and new claims can be found throughout the application, for instance at pages 4-5, 5 (lines 14-15), and 9 (lines 14-16) of the specification and in the claims as originally filed. No new matter is added. Claims 1-14 are submitted for further consideration at this time. Applicants respectfully request reconsideration and withdrawal of all rejections.

Claim Rejections - Double Patenting

Claims 1-11 are rejected under the judicially created doctrine of obviousness-type double patenting over Strepparola et al. (U.S. Patent No. 5,980,642). Applicants respectfully point out that the rejection is moot in light of the filing herewith of the duly executed Terminal Disclaimer with respect to U.S. Patent No. 5,980,642. Applicants urge withdrawal of the rejection.

Claim Rejections - 35 USC §112

Claims 1-11 are rejected under 35 USC §112, second paragraph, as being indefinite. Applicants respectfully point out that the rejection is moot in light of the claim amendments indicated herein. With respect to claim 4, Applicants would like to point out that support for the meaning of Y can be found at page 5 (lines 14-15) of the specification. Also, in order to better clarify the meaning of R_f in claim 1, the term "(per)fluoropolyethers radical" has been rewritten to recite the two corresponding terms

"perfluoropolyether or fluoropolyether radical". Applicants urge withdrawal of the rejection.

Claims Rejections - 35 USC §102

Claims 1-11 are rejected under 35 USC §102(b) as being anticipated by Strepparola et al. (U.S. Patent No. 5,980,642).

Claims 1-11 are also rejected under 35 USC §102(e) as being anticipated by Strepparola et al. (U.S. Patent No. 6,096,240).

It is alleged that the cited references teach each and every element of the claimed invention.

Applicants respectfully disagree. The present invention in a preferred embodiment is concerned with a method for removing water from surfaces of substrata, comprising the steps of covering said surface with a composition having a specific weight higher than that of the water and subsequently removing water from the composition by skimming, wherein a composition essentially consisting of the following components is used: (A) and (B) as claimed. A) is a non ionic additive having a fluoropolyether structure with a fluorinated T end group containing one chlorine atom, having the following formula: $T-OR_f(CFY)-L$ (I), as claimed, wherein the number average molecular weight of the fluoroether part $T-OR_f$ is in the range 400 - 2,000, and a ratio by weight (K) between the fluorinated part and an L part of the additive is in the range 1.50 - 4.00; n in formula (Ia) is such as the ratio (K) is in the range 1.50 - 4.00. B) is a

perfluoropolyether having number average molecular weight in the range 300 - 900, provided that a ratio (K^l) between the number average molecular weight of the fluoropolyether part T-OR_f of the additive A) and the number average molecular weight of component B) is higher than 1.60.

Applicants respectfully submit that no such invention is taught or suggested in either of the cited references. In contrast to the present invention, both of the Strepparola et al. references disclose a method for removing water from surfaces by using (per)fluoropolymers with small amounts of non-ionic additive formed by a polyethoxylate-base moiety L and by a fluoropolyether moiety having a (per)fluoroalkyl end group, wherein the additive has a ratio K by weight between the fluoro-moiety and the L moiety from 1.5 to 3.5.

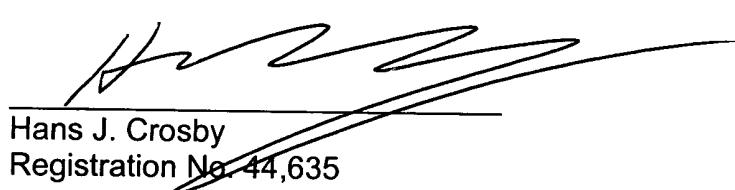
Applicants therefore emphasize that unlike the cited references, the claimed invention requires compositions that satisfy the ratio (K^l) between the number average molecular weight of the fluoropolymers part T-OR_f of the additive A) and the number average molecular weight of component B) being higher than 1.6, as claimed. In other words, the methods of the claimed invention require the use of compositions not specifically taught or suggested in either of the cited references. That is, both of the Strepparola et al. references fail to teach or suggest any compositions according to the claimed invention, much less the methods according to the claimed invention. Moreover, both of the Strepparola et al. references also fail to teach or suggest any method that is effective in removing water by skimming, as is the claimed invention. Applicants have verified that it is not possible to remove water from surfaces by

skimming when using any composition or method including a non ionic additive containing Cl atom in the end group and a perfluoropolyether, but not having a K¹ ratio higher than 1.60, as are disclosed by both of the Strepparola et al. references. See comparative examples 3 to 5. Therefore, in that the cited references are unable to teach or suggest each and every element of the claimed invention, Applicants urge withdrawal of all rejections.

In view of the amendments and remarks above, Applicants respectfully submit that the application is in condition for allowance and request favorable action thereon.

In the event this paper is not considered to be timely filed, Applicants hereby petition for an appropriate extension of time. The fee for this extension may be charged to our Deposit Account No. 01-2300. The Commissioner is hereby authorized to charge any fee deficiency or credit any overpayment associated with this communication to Deposit Account No. 01-2300, referencing Attorney Docket No. 108910-00046.

Respectfully submitted,



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Enclosures: Marked-up Copy of Amended Claims

MARKED-UP COPY OF AMENDED CLAIMS

1. (Amended) A method for removing water from surfaces of [various materials] substrata, comprising the steps of covering said surface with a composition having a specific weight higher than that of the water and subsequently removing water from the composition by skimming, wherein a composition essentially consisting of the following components is used:

A) a non ionic additive having a fluoropolyether structure with a fluorinated T end group containing one chlorine atom, having the following formula:



wherein



wherein:



with R'' = H; C₁₋₃ alkyl,

T is a fluorinated radical selected from ClCF₂CF(CF₃)₂-, CF₃CFCICF₂-, ClCF₂CF₂-, ClCF₂-,

Y = CF₃ or F,

- [the radical] R_f [being of] is a [(per)fluoropolyether] perfluoropolyether or fluoropolyether radical [type];

[being in said additive of formula (I):]

- the number average molecular weight of the fluoroether part T-OR_f is in the range 400 - 2,000,
- a [the] ratio by weight (K) between the fluorinated part and an [the hydrogenated] L part of the additive is in the range 1.50 - 4.00; [the n parameter] n in formula (la) [being] is such as [to meet said] the ratio (K) is in the range 1.50 - 4.00;

B) a perfluoropolyether having number average molecular weight in the range 300 - 900, [the ratio K^l between] provided that a ratio (K^l) between the number average molecular weight of the fluoropolyether part T-OR_f of the additive A) and the number average molecular weight of component B) [being] is higher than 1.60.

2. (Amended) A method according to claim 1, wherein the number average molecular weight of the fluoroether part T-OR_f of the compounds of formula (I) component A) is [preferably] in the range 500 - 1,200[, still more preferably in the range 600 - 1,000].

3. (Twice Amended) A method according to claim 1, wherein the perfluoropolyether component B) has number average molecular weight [preferably] in the range of 300-650.

4. (Twice Amended) A method according to claim 1, wherein the radical R_f [of fluoropolyether type preferably] comprises repeating units statistically distributed along the polymer chain selected from: 1) (CF₂CF₂O), 2) (CFYO) wherein Y is equal to F or CF₃, 3) (C₃F₆O); 4) (CF₂(CF₂)_zO) wherein z is an integer equal to 2 or 3; 5)

$(CF_2CF(OR_f)O)[,]$ or $(CF(OR_f)O)$ wherein R_f is equal to $-CF_3$, $-C_2F_5$, $-C_3F_7$; 6)
 $CR_4R_5CF_2CF_2O$ wherein R_4 and R_5 are equal to or different from each other and selected between Cl or perfluoroalkyl[, preferably] having 1-4 carbon atoms.

5. (Amended) A method according to claim 4, wherein the group R_f comprises the following repeating units:

(a) $-(CF_2CF(CF_3)O)_a(CFYO)_b-$

wherein Y is F or CF_3 ; a and b are integers such that the molecular weight of T-OR_f is in the [above] range 400 - 2,000; a/b is in the range 10 -100;

(b) $-(CF_2CF_2O)_c(CF_2O)_d(CF_2(CF_2)_zO_h)-$

wherein c, d and h are integers such that the molecular weight of T-OR_f is within the [above] range 400-2,000; c/d is in the range 0.1 - 10; h/(c+d) is in the range 0 - 0.5, z = 2 or 3 [has the above value], h can be equal to 0;

(c) $-(CF_2CF(CF_3)O)_e(CF_2CF_2O)_f(CFYO)_g-$

wherein Y is F or CF_3 ; e, f, g are integers such that the molecular weight of T-OR_f is within the [above] range 400 - 2,000; e/(f+g) is in the range 0.1 - 10, f/g is in the range 2 - 10;

(d) $-(CF_2O)_j(CF_2CF(OR_f)O)_k(CF(Or_f)O)_l-$

wherein: R_f is $-CF_3$, $-C_2C_5$, $-C_3F_7$; j, k, l are integers such that the molecular weight of T-OR_f is within the [above] range 400 - 2,000; k+l and j+k+l are at least equal to 2, k/(j+l) is in the range 0.01 - 1,000, l/j is in the range 0.01 - 100;

(e) $-(CF_2(CF_2)_zO)_s-$

wherein s is an integer such as to give the [above] molecular weight of T-OR_f in the range 400 - 2,000, z [has the already defined meaning] = 2 or 3;

(f) -(CR₄R₅CF₂CF₂O)_j-

wherein R₄ and R₅ are equal to or different from each other and selected from H, Cl or perfluoroalkyl, having 1-4 carbon atoms, j' being an integer such that the molecular weight of T-OR_f is [the above one] in the range 400 - 2,000;

(g) -(CF(CF₃)CF₂O)_{j''}-

j'' being an integer such to give the [above] molecular weight of T-OR_f in the range 400 - 2,000.

6. (Twice Amended) A method according to claim 1, wherein the value K^l is higher than 2.00 [and preferably in the range 2.00-3.00].

7. (Twice Amended) A method according to claim 1, wherein the perfluoropolyether component B) [preferably] has the following structure:

T' - O - R_f - T"

wherein:

R_f [has] is the [above meaning] perfluoropolyether radical according to claim 1;

T' and T", equal to or different, are selected from -CF₃, -C₂F₅, -C₃F₇.

8. (Amended) A method according to claim 7, wherein the perfluoropolyether component B) has a structure selected from the following:

(III) T'O(C₃F₆O)_a"(CFYO)_bT"

wherein Y = F or CF₃, a" and b" are integers such that the molecular weight of B) is within the range 300 - 900 with a"/b" in the range 1-40; T' and T" are as above defined.

(IV) T'O(C₂F₄O)_p(CF₂O)_qT"

wherein p and q are integers such that the molecular weight of B) is within the [indicated] range 300 - 900 with p/q in the range 0.6 - 1.2; T' and T" are as above defined.

(V) T'O(C₃F₆O)_{s'}T"

wherein s' is an integer such that the molecular weight of B) is within the [indicated] range 300 - 900; T' and T" are as above defined.

9. (Twice Amended) A method according to claim 1, wherein the amount of additive A) in the compositions is lower than or equal to 0.1% by weight, [preferably lower than 0.05%] with respect to the total weight of the composition.

10. (Twice Amended) A composition consisting essentially of component A) and component B) according to claim 1.